Latest SHA Specifications and Special Provisions for materials and construction. Latest AASHTO Standard Specifications for Highway Bridges for design.

Materials:

Posts and rails shall conform to ASTM F-1083, Schedule 80. Fabric shall be 6 gauge, 2" PVC coated mesh conforming to 914.01.

All posts, braces, fittings and hardware shall be PVC coated. Coating shall conform to 914.03 except that nuts, bolts and washers shall also be PVC coated and touched up after installation.

All plates shall be steel conforming to ASTM A 709 Grade 36.

Anchor studs or anchor bolts shall conform to ASTM A 276, Type 430 or Type 304 stainless steel annealed, hot-finished, ultimate strength 70 000 psi min., 20% min. elongation. Threads may be rolled or cut.

Epoxy grout for anchor studs in cored holes shall conform to $902.11\,(\mathrm{d})$.

PVC color for all elements of fence shall be black unless otherwise noted.

Construction:

All longitudinal rails shall be parallel to top of parapet.

All posts shall be set normal to top of parapet for roadway grades 6% or less. For grades over 6% posts shall be set plumb.

The chain link fence shall be true to line, taut, tight fit to top of parapet, with $\frac{1}{2}$ " min. to 1" max. gap, and shall comply with the best practice for fence construction of this type.

Post and rails shall be permanently positioned before fabric is placed.

For post spacing see pertinent structure sheets.

Precoated longitudinal rails, if cut, shall have the cut end coated with PVC touch up material supplied by the manufacturer prior to erection.

If Contractor elects to place anchor studs after placing concrete parapet, newly placed rebars shall be located so that coring does not damage same, all holes shall be cored (not drilled) and the diameter of the cored holes for the anchor studs shall be $\mathring{\slashed{N}}_8''$.

Measurement and Payment:

The furnishing, fabricating, erecting, etc., of all new chain link fence on the bridges, complete in place, will not be measured for payment but all costs thereof shall be included in the Contract lump sum prices for the pertinent Chain Link Safety Fence For Bridge items.

The furnishing, fabricating, erecting, etc., of all new chain link fence anti-climb shields, complete in place, will be measured and paid for at the Contract unit prices per each for the pertinent Chain Link Safety Fence Anti-Climb Shield items.

Any defects uncovered by the inspection of welds on base plates and poles shall be repaired or replaced by new members at no additional cost to the Administration.

APPROVAL
OFFICE OF STRUCTURES
DATE: 6/3/76
REVISIONS

FHWA

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF STRUCTURES

CHAIN LINK SAFETY FENCE-NEW STRUCTURES

GENERAL NOTES

SHA

STANDARD NO. BR-SS(3.01)-75-21

SHEET ____ OF__

Bridge Design Specifications.

Materials:

Posts and rails shall conform to ASTM F-1083, Schedule 80. Fabric shall be 6 gauge, 2" PVC coated mesh conforming to 914.01.

All posts, braces, fittings and hardware shall be PVC coated. Coating shall conform to 914.03 except that nuts, bolts and washers shall also be PVC coated and touched up after installation.

All plates shall be steel conforming to ASTM A 709 Grade 36.

Anchor studs or anchor bolts shall conform to ASTM A 276, Type 430 or Type 304 stainless steel annealed, hot-finished, ultimate strength 70 000 psi min., 20% min. elongation. Threads may be rolled or cut.

Epoxy grout for anchor studs in cored holes shall conform to $902.11\,(\mathrm{d})$.

PVC color for all elements of fence shall be black unless otherwise noted.

Construction:

All longitudinal rails shall be parallel to top of parapet.

All posts shall be set normal to top of parapet for roadway grades 6% or less. For grades over 6% posts shall be set plumb.

The chain link fence shall be true to line, taut, tight fit to top of parapet, with $\frac{1}{2}$ " min. to 1" max. gap, and shall comply with the best practice for fence construction of this type.

Post and rails shall be permanently positioned before fabric is placed.

For post spacing see pertinent structure sheets.

Precoated longitudinal rails, if cut, shall have the cut end coated with PVC touch up material supplied by the manufacturer prior to erection.

If Contractor elects to place anchor studs after placing concrete parapet, newly placed rebars shall be located so that coring does not damage same, all holes shall be cored (not drilled) and the diameter of the cored holes for the anchor studs shall be $\mathring{\slashed{N}}_8''$.

Measurement and Payment:

The furnishing, fabricating, erecting, etc., of all new chain link fence on the bridges, complete in place, will not be measured for payment but all costs thereof shall be included in the Contract lump sum prices for the pertinent Chain Link Safety Fence For Bridge items.

The furnishing, fabricating, erecting, etc., of all new chain link fence anti-climb shields, complete in place, will be measured and paid for at the Contract unit prices per each for the pertinent Chain Link Safety Fence Anti-Climb Shield items.

Any defects uncovered by the inspection of welds on base plates and poles shall be repaired or replaced by new members at no additional cost to the Administration.

APPROVAL
C.S. Freedman DIRECTOR OFFICE OF STRUCTURES
DATE: 6/3/76
REVISIONS

FHWA

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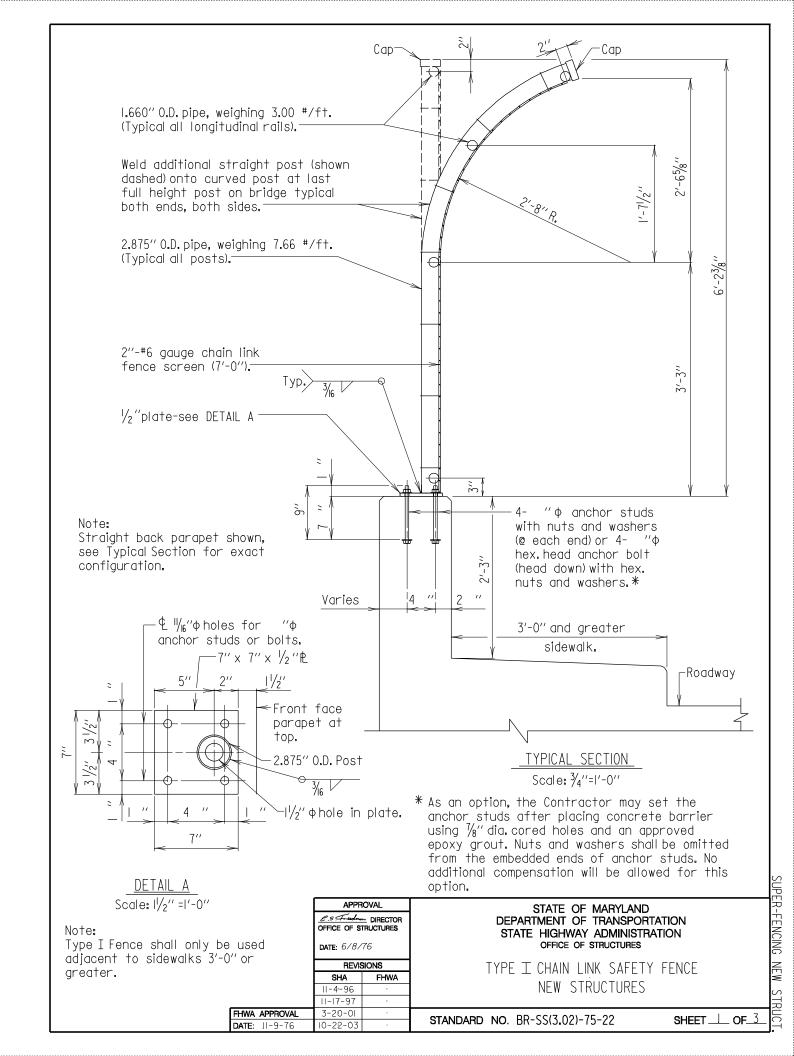
CHAIN LINK SAFETY FENCE-NEW STRUCTURES

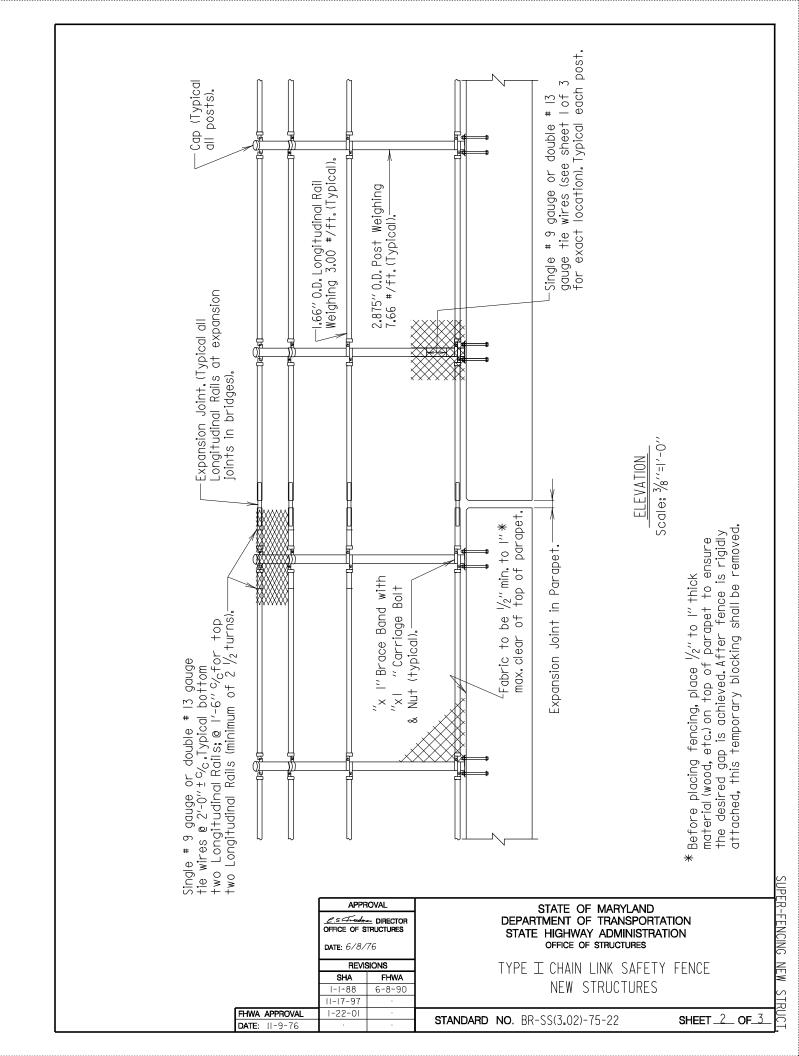
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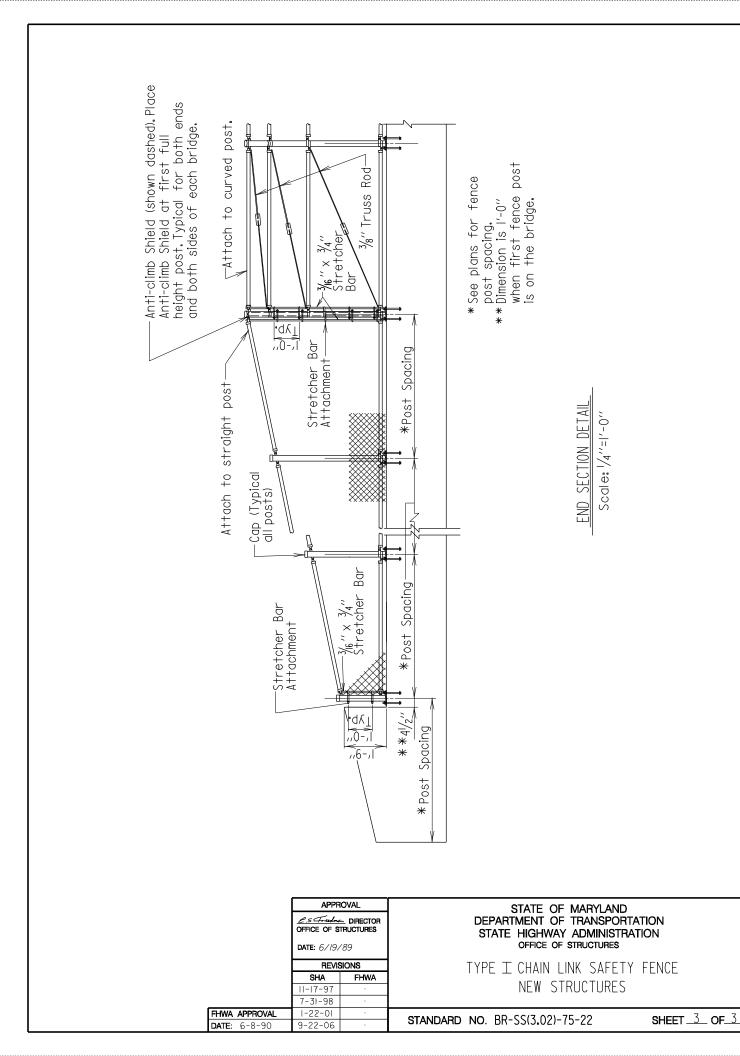
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STANDARD NO. BR-SS(3.01)-75-21(L)

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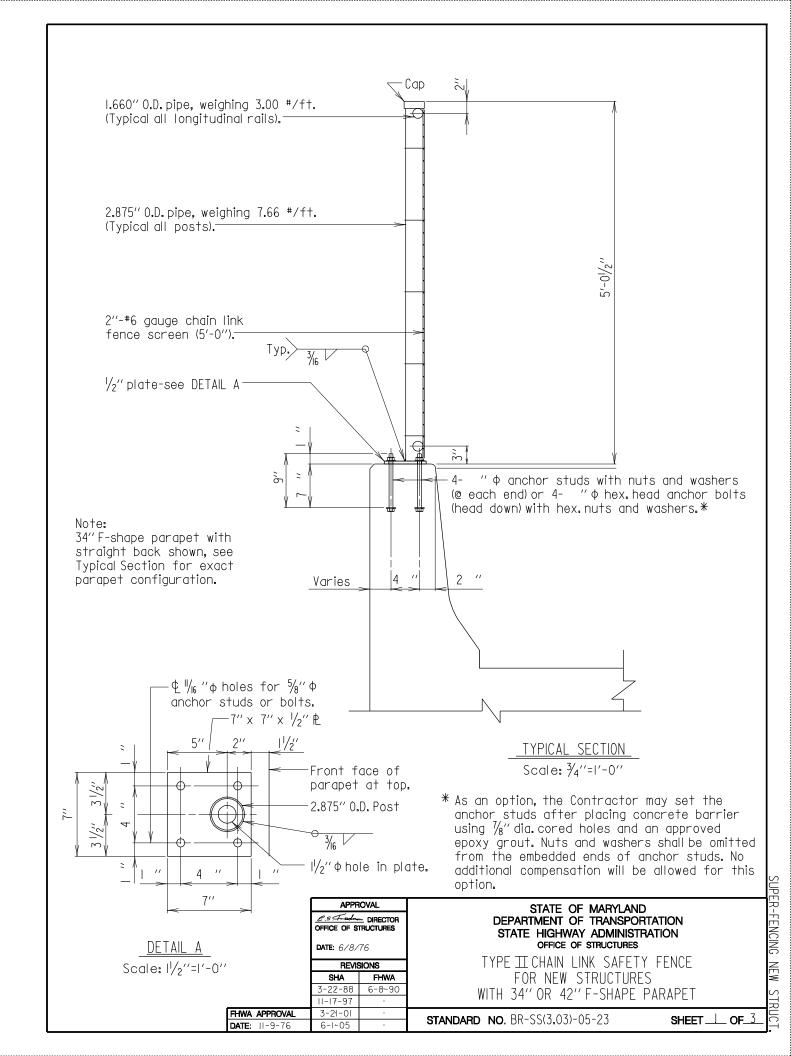


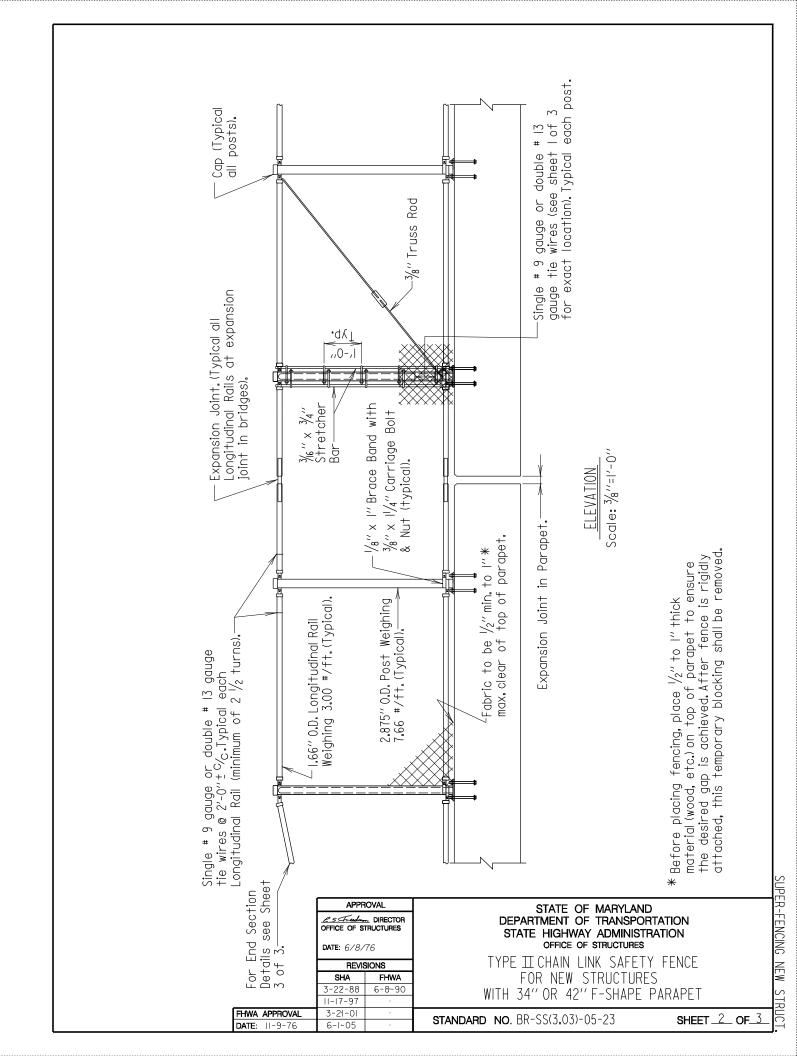


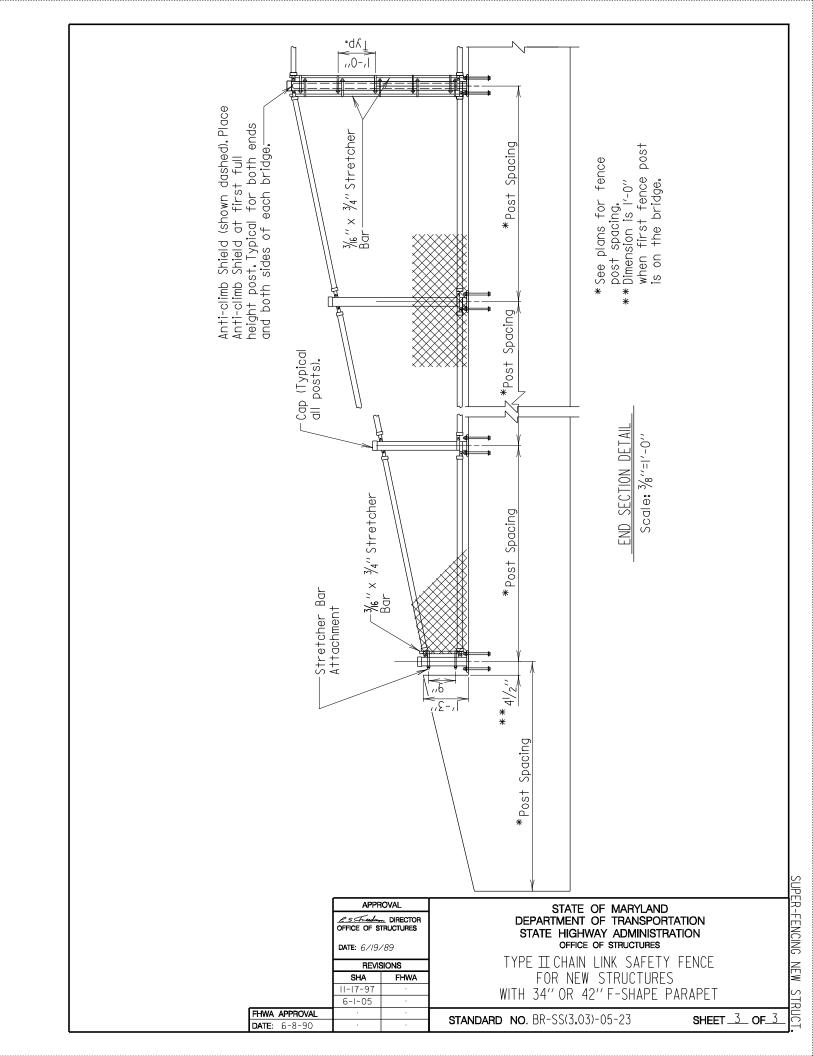


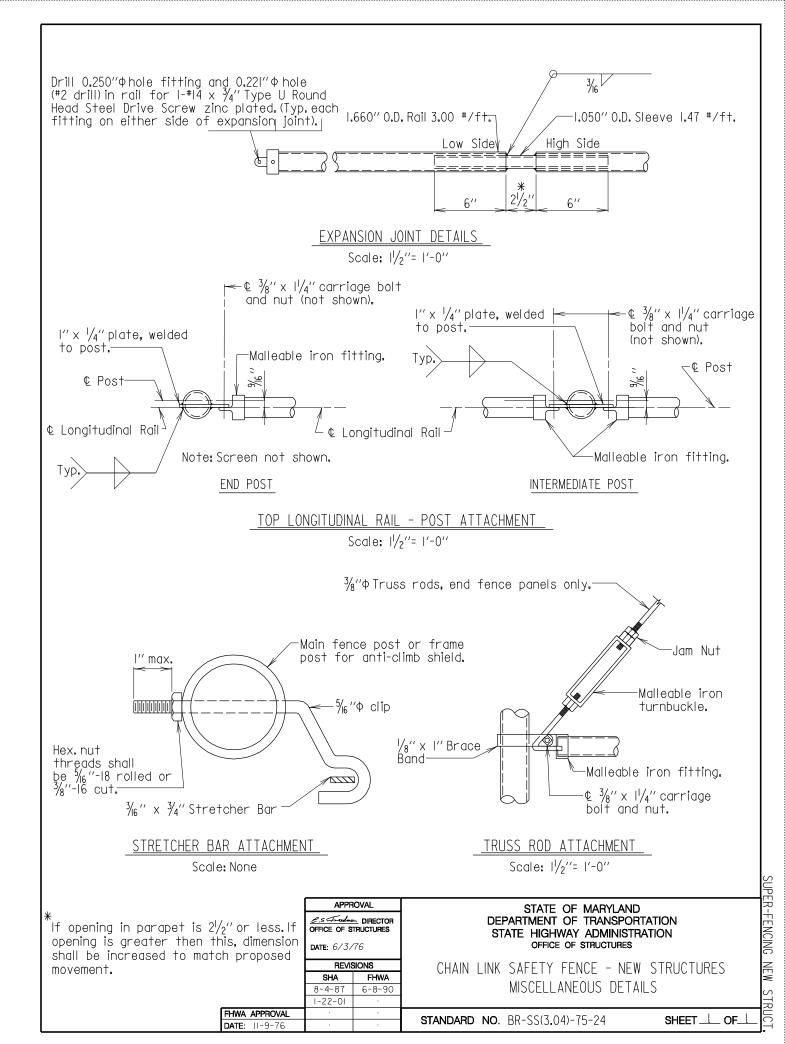
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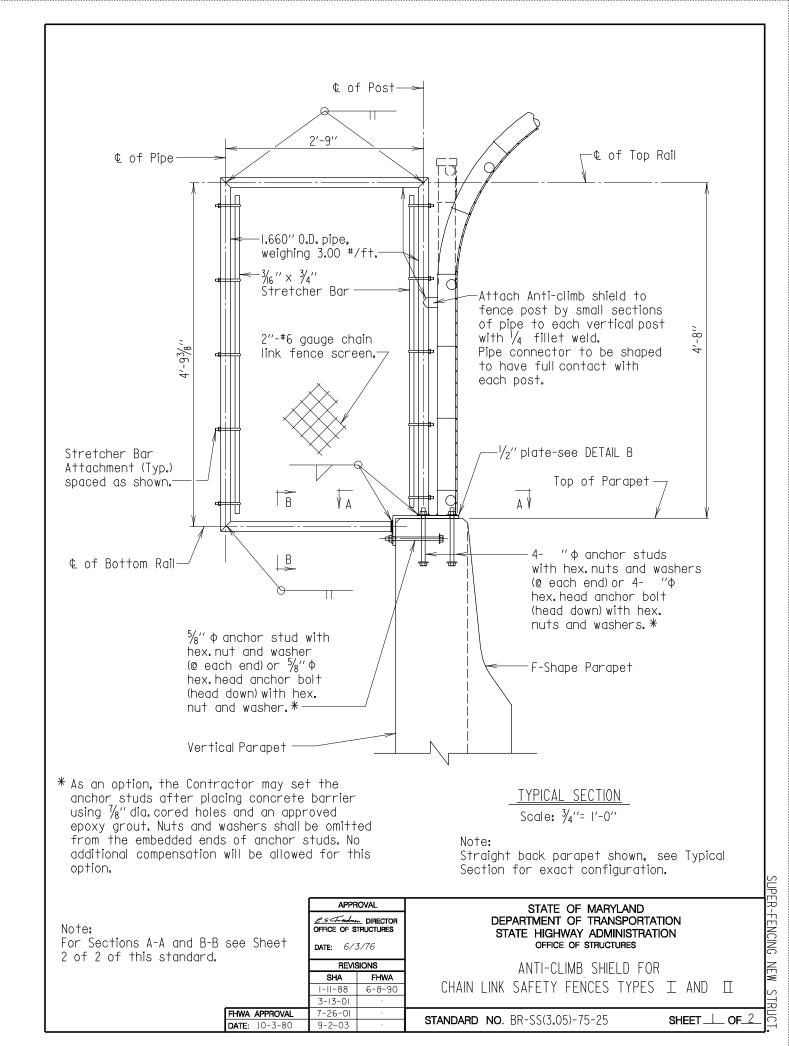
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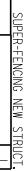


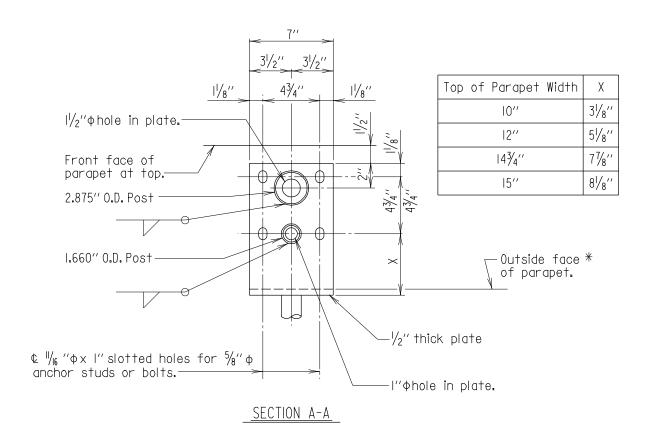


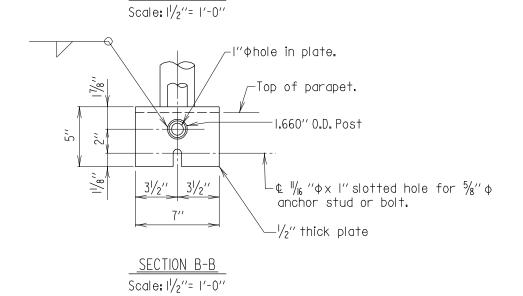












* For Special Parapets outside face of parapet to be formed with a 8" wide recess, perpendicular to top of parapet, to accept anti-climb shield base plate. Recess to be 5" long measured from top of parapet.

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FHWA APPROVAL

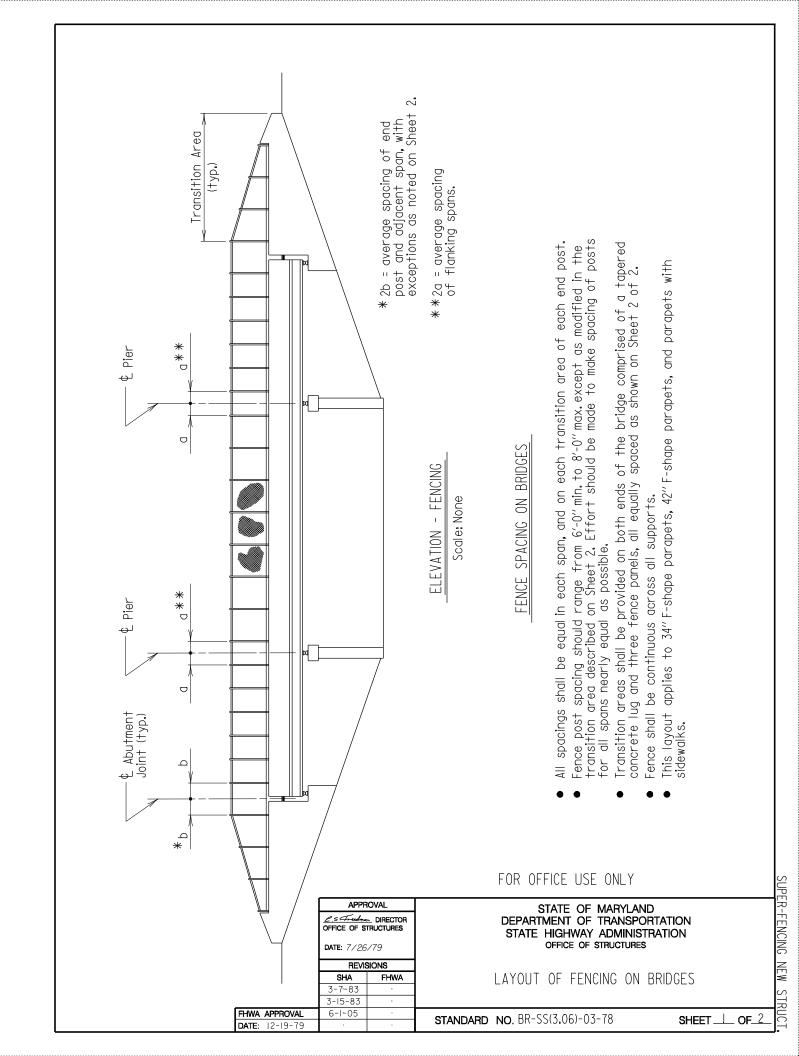
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STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES

ANTI-CLIMB SHIELD FOR CHAIN LINK SAFETY FENCES TYPES $\ \square$ AND $\ \square$

STANDARD NO. BR-SS(3.05)-75-25

SHEET 2 OF 2



* 2b = average spacing of end post and adjacent span, with exceptions stated in Note 4.

ELEVATION - END POST TRANSITION AREA

Scale: None

- I. Transition areas should be provided on both ends of the bridge, comprised of a tapered concrete lug and three tapered fence panels, all equally spaced.

 2. The end of the concrete lug on both the approach and trail end shall be 2'-8".
- 3. The End Post Transition Area shall always begin at the end of the end post and be laid out in accordance with the following chart.
- 4. When roadway joint falls in the middle of a tapered panel (Joint Locations B, C, and D) the first full height panel on the bridge shall be the average spacing of the panels in the transition area and the adjacent span.

END POST TRANSITION AREA

Roadway Joint Location	End Post Length	Fence Transition Panels on End Post	Fence Transition Panels on Bridge
А	L ≤ 8'-0''	0	3
В	8'-0'' < L· <u><</u> I2'-0''	1/2	21/2
C	12'-0'' < L· <u>⟨</u> 20'-0''	11/2	11/2
D	20'-0'' ⟨ L: <u>⟨</u> 28'-0''	21/2	1/2
**E	28′-0′′ ⟨ L	$3 + (n + \frac{1}{2})$ full height panels	0

** Location of Bridge Expansion Joint E varies depending on the number of full height panels on the endpost.

FOR OFFICE USE ONLY

n = the number of full height panels on the end post

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DATE: 6/1/0	05	
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STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES

LAYOUT OF FENCING ON BRIDGES

FHWA APPROVAL **STANDARD NO.** BR-SS(3.06)-03-78

SHEET 2 OF 2

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Latest SHA Specifications and Special Provisions for materials and construction. Latest AASHTO Standard Specifications for Highway Bridges for design.

Materials:

Posts and rails shall conform to ASTM F-1083, Schedule 80. Fabric shall be 6 gauge, 2" PVC coated mesh conforming to 914.01.

All posts, braces, fittings and hardware shall be PVC coated. Coating shall conform to 914.03 except that nuts, bolts and washers shall also be PVC coated and touched up after installation.

All plates shall be steel conforming to ASTM A 709 Grade 36.

Anchor studs or anchor bolts shall conform to ASTM A 276, Type 430 or Type 304 stainless steel annealed, hot-finished, ultimate strength 70 000 psi min., 20% min. elongation. Threads may be rolled or cut.

Epoxy grout for anchor studs in cored holes shall conform to 902.11 (d).

PVC color for all elements of fence shall be black unless otherwise noted.

Construction:

All longitudinal rails shall be parallel to top of wall.

All posts shall be set normal to top of wall for roadway grades 6% or less. For grades over 6% posts shall be set plumb.

The chain link fence shall be true to line, taut, tight fit to top of wall $(\frac{1}{2})''$ maximum gap) and shall comply with the best practice for fence construction of this type.

Post and rails shall be permanently positioned before fabric is placed.

For post spacing see pertinent structure sheets.

Precoated longitudinal rails, if cut, shall have the cut end coated with PVC touch up material supplied by the manufacturer prior to erection.

If Contractor elects to place anchor studs after placing concrete wall, newly placed rebars shall be located so that coring does not damage same, all holes shall be cored (not drilled) and the diameter of the cored holes for the anchor studs shall be %

Measurement and Payment:

The furnishing, fabricating, erecting, etc., of all new chain link fence on the retaining wall or culvert headwalls and wing walls, complete in place, will not be measured for payment but all costs thereof shall be included in the Contract lump sum prices for the pertinent Retaining Wall or Box Culvert item(s).

Any defects uncovered by the inspection of welds on base plates and poles shall be repaired or replaced by new members at no additional cost to the Administration.

APPROVAL	
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STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
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OFFICE OF STRUCTURES

CHAIN LINK SAFETY FENCE
RETAINING WALLS AND BOX CULVERTS
GENERAL NOTES

7-24-01

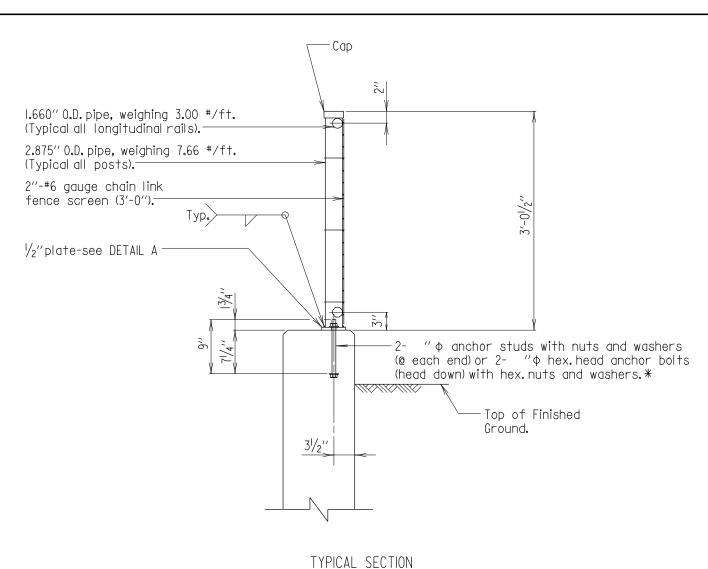
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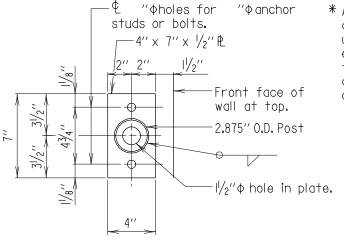
STANDARD NO.BR-\$\$(3,11)-96-317

SHEET ____ OF__





Scale: $\frac{3}{4}$ " = 1'-0"



FHWA APPROVAL

* As an option, the Contractor may set the anchor studs after placing concrete wall using 7/8" dia.cored holes and an approved epoxy grout. Nuts and washers shall be omitted from the embedded ends of anchor studs. No additional compensation will be allowed for this option.

Note: This fence shall be used on box culverts with headwalls located at the bottom of fill slopes.

DETAIL A	
Scale: $1\frac{1}{2}$ " = 1'-0"	,

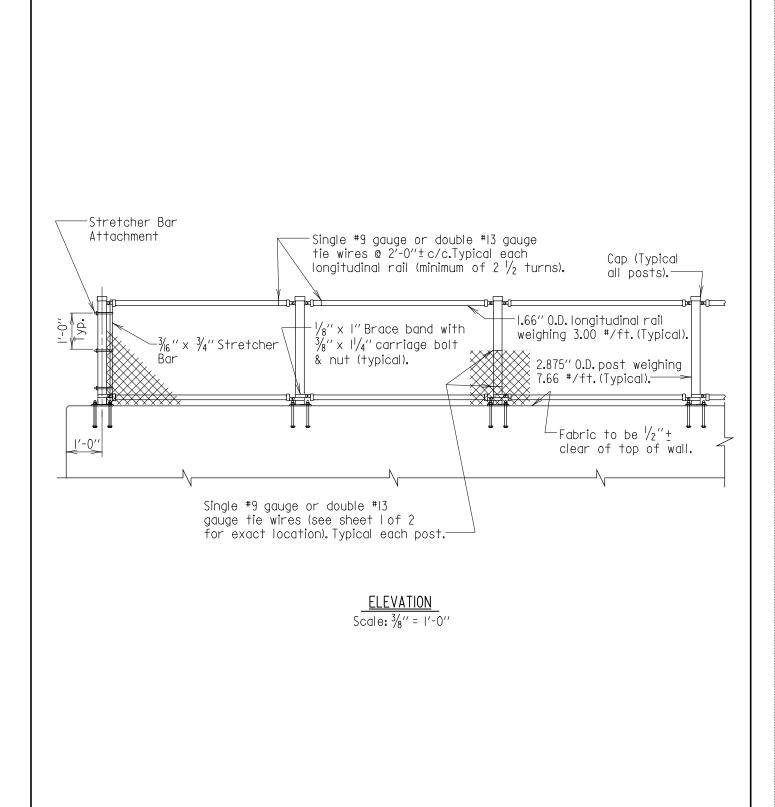
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STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES

TYPE III CHAIN LINK SAFETY FENCE RETAINING WALLS AND BOX CULVERTS

STANDARD NO. BR-SS(3,12)-96-318

SHEET ___ OF_2



For additional details see Std. No. BR-SS(3.04)-75-24.

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C.S. Freedom DIRECTOR OFFICE OF STRUCTURES
DATE: ///6/96

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STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES

TYPE III CHAIN LINK SAFETY FENCE RETAINING WALLS AND BOX CULVERTS

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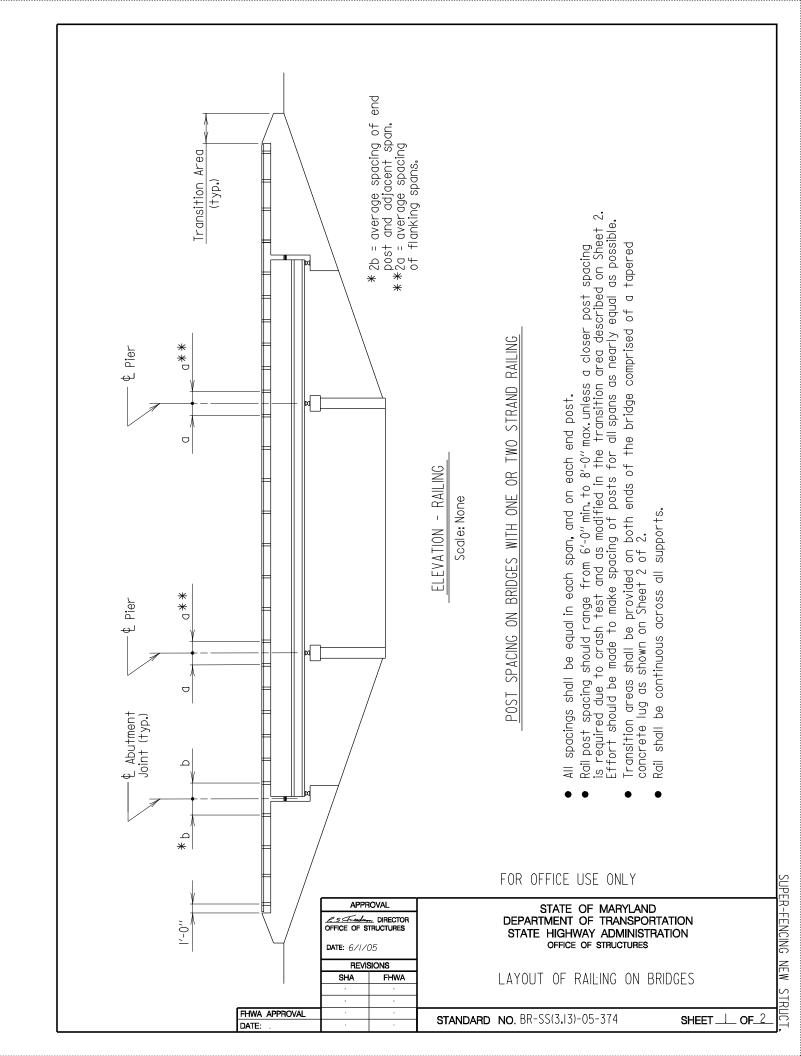
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SHEET 2 OF 2

SUPER-FENCING

NEW

STRUCT



* 2b = average spacing of end post and adjacent span.

ELEVATION - END POST TRANSITION AREA Scale: None

Notes:

- I. Transition areas should be provided on both ends of the bridge, comprised of a tapered concrete lug. 2. Transition areas will always begin at the end of the end posts and be laid out in accordance with
- the following chart.
- 3. All rail spaces shall be equal in each span.

END POST TRANSITION AREA

Roadway Joint Location	End Post Length	Rail Panels on End Post
А	L <u>≤</u> 8′-0′′	0
В	8'-0'' ⟨ L· <u>⟨</u> I2'-0''	1/2
**0	20′-0′′ < L	(n + ½) full rail panel

**Location of Bridge Expansion Joint C varies depending on the number of full height rail panels on the endpost.

FOR OFFICE USE ONLY

n = the number of full rail panels on the end post

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STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES

LAYOUT OF RAILING ON BRIDGES

STANDARD NO. BR-SS(3.13)-05-374

SHEET 2 OF 2